

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: February 16, 2005, 16:08:55 ; Search time 72.962 Seconds
 (without alignments)
 2014.322 Million cell updates/sec

Title: US-10-003-356-5
 Perfect score: 1986
 Sequence: 1 LPHSVCTDVCPGTRGRGFVQ.....TVSTVLDRLIYMCPLRLQ 380

Scoring table: BLOSUM62
 Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0*

Maximum Match 100*

Listing first 45 summaries

Database : A_Geneseq_16Dec04:
 1: geneseqp1980s:
 2: geneseqp1990s:
 3: geneseqp2000s:
 4: geneseqp2001s:
 5: geneseqp2002s:
 6: geneseqp2003as:
 7: geneseqp2003as:
 8: geneseqp2004s:
 8:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1986	100.0	380	5 AAE24049	Aae24049 Human V2
2	1986	100.0	927	5 AAE24050	Aae24050 Chimeric
3	1906	96.0	755	7 ADC85997	Adc85997 Human GPC
4	1749	88.1	365	5 ABP95621	Abp95621 Human GPC
5	1727.5	87.0	720	7 ADC12754	Adc12754 Human GPC
6	1444	72.7	912	8 ADI41024	Adi41024 Mouse phe
7	796.5	40.1	835	4 AAY72614	Aay72614 Carassius
8	787.5	39.7	848	8 ADI40974	Adi40974 Goldfish
9	787.5	39.7	848	8 ADI41018	Adi41018 Goldfish
10	783.5	39.5	851	4 AAY72617	Aay72617 Carassius
11	771.5	38.8	856	4 AAY72615	Aay72615 Carassius
12	769.5	38.7	844	8 ADI41017	Adi41017 Goldfish
13	769.5	38.7	844	8 ADI40973	Adi40973 Goldfish
14	760.5	38.3	854	4 AAY72616	Aay72616 Carassius
15	753.5	37.9	880	8 ADI40971	Adi40971 Fugu pher
16	753.5	37.9	880	8 ADI41021	Adi41021 Fugu pher
17	751	37.8	875	8 ADI40972	Adi40972 Fugu pher
18	751	37.8	875	8 ADI41023	Adi41023 Fugu pher
19	747	37.6	856	8 ADI41019	Adi41019 Fugu pher
20	747	37.6	856	8 ADI40970	Adi40970 Fugu pher
21	736.5	37.1	1026	2 AAW32059	Aaw32059 Dogfish 8
22	736.5	37.1	1027	5 AAU76004	Aau76004 Shark kid
23	736.5	37.1	1027	5 ABB78761	Abb78761 Dogfish 8
24	736.5	37.1	1027	7 ADH10917	Adh10917 Shark pol
25	736.5	37.1	1027	7 ABW02706	Abw02706 Dogfish 8

RESULT 1 AAE24049					
ID	AAE24049 standard; protein; 380 AA.	XX	XX	AC	AAE24049;
XX	DT 04-OCT-2002 (first entry)	XX	XX	FT	Key
XX	Human V2 vomeronasal receptor (Zvn2R1) C-terminal protein.	XX	XX	FT	Domain
XX	Human; V2 vomeronasal receptor; Zvn2R1; educational tool; gene therapy; receptor.	XX	XX	FT	Location/Qualifiers
XX	Homo sapiens.	OS	XX	FT	75..100
XX			XX	FT	/note= "Transmembrane domain-1"
XX			XX	FT	101..113
XX			XX	FT	/note= "Intracellular domain"
XX			XX	FT	114..134
XX			XX	FT	/note= "Transmembrane domain-2"
XX			XX	FT	135..145
XX			XX	FT	/note= "Extracellular domain"
XX			XX	FT	146..170
XX			XX	FT	/note= "Transmembrane domain-3"
XX			XX	FT	171..188
XX			XX	FT	/note= "Intracellular domain"
XX			XX	FT	189..208
XX			XX	FT	/note= "Transmembrane domain-4"
XX			XX	FT	209..230
XX			XX	FT	/note= "Intracellular domain"
XX			XX	FT	231..255
XX			XX	FT	/note= "Transmembrane domain-5"
XX			XX	FT	256..268
XX			XX	FT	/note= "Intracellular domain"
XX			XX	FT	269..289
XX			XX	FT	/note= "Extracellular domain"
XX			XX	FT	290..330
XX			XX	FT	/note= "Transmembrane domain-7"
XX			XX	FT	331..325
XX			XX	FT	/note= "Intracellular domain"
XX			XX	FT	326..380
XX			XX	FT	/note= "Extracellular domain"
XX			XX	FT	30..MAY-2002.

XX	PF	15-NOV-2001; 2001WO-US046034.	Qy	361 TYSTVLDDRVLIYMCPLKLQ 380
XX	PR	21-NOV-2000; 2000US-0252373P.	Db	361 TYSTVLDDRVLIYMCPLKLQ 380
XX	PA (ZYMO) ZYMOGENETICS INC.			
XX	PI	Lok S, Holloway JL;		
XX	DR	WPI; 2002-479953/51.		
XX	DR	N-PSDB; AAD39170.		
PT	PT	Novel isolated human V2 vomeronasal receptor, termed Zvn2R1, for identifying presence of Zvn2R1 ligand in sample, as educational tools in laboratory practicum kits for courses related to genetics and molecular biology.		
XX	PT	Claim 1; Page 85-86; 98pp; English.		
XX	CC	The invention relates to an isolated human V2 vomeronasal receptor termed Zvn2R1. The Zvn2R1 nucleic acid is useful for detecting the expression of Zvn2R1 gene in a biological sample, to determine if a subject's chromosomes contain a mutation in the Zvn2R1 gene, and for therapeutic purposes. Zvn2R1 is useful as an aid to teach preparation of antibodies, identifying proteins by Western blotting, protein purification, determining the weight of expressed Zvn2R1 polypeptides as a ratio to total protein expressed, identifying peptide cleavage sites, coupling amino and carboxyl terminal tags, amino acid sequence analysis, monitoring biological activities of both the native and tagged protein in vitro and in vivo and to teach analytical skills such as mass spectrometry, circular dichroism to determine conformation, especially of the four alpha helices X-ray crystallography to determine the three-dimensional structure in atomic detail, and nuclear magnetic resonance spectroscopy to reveal the structure of proteins in solution. Zvn2R1 is useful as educational tools in laboratory practicum kits for courses related to genetics and molecular biology, protein chemistry, antibody production and analysis, and as standards or as unknowns for testing purposes. The invention is useful as a teaching aid to instruct students how to prepare affinity chromatography columns to purify Zvn2R1, and for cloning and sequencing the polynucleotide that encodes an antibody and thus as a practicum for teaching a student how to design humanised antibodies. The invention is useful in gene therapy. The present sequence is human Zvn2R1 C-terminal protein.		
XX	SQ	Sequence 380 AA:		
CC	Query Match 100.0%; Score 1986; DB 5; Length 380;			
CC	Best Local Similarity 100.0%; Pred. No. 4.6e-201;			
Matches 380; Conservative 0; Mismatches 0; Indels 0; Gaps 0;				
Qy	1 LPHSVCTDVCPGPGFVQEPICCFDSIPCADGHVSRKPGERECEQCGEDYWSNAQKS 60			
Db	1 LPHSVCTDVCPGPGFVQEPICCFDSIPCADGHVSRKPGERECEQCGEDYWSNAQKS 60			
Qy	61 ECVLKEYEVLAYDEALGFTLVYLTSVFGAFAVFLVLTAVTYYVTHRHTPLVNADWQLGFLIQV 120			
Db	61 ECVLKEYEVLAYDEALGFTLVYLTSVFGAFAVFLVLTAVTYYVTHRHTPLVNADWQLGFLIQV 120			
Qy	121 SLIIMLSSMLFIDKPHNWSMAGQVTLLGFSLCLSLLGKTSLSFLAYRISKSQTQLT 180			
Db	121 SLIIMLSSMLFIDKPHNWSMAGQVTLLGFSLCLSLLGKTSLSFLAYRISKSQTQLT 180			
Qy	181 SMHPLYRKIIIVLISVLAEGICITAYLILEPPMVYKANMESQNTKILIGCNEISIEFLYSMF 240			
Db	181 SMHPLYRKIIIVLISVLAEGICITAYLILEPPMVYKANMESQNTKILIGCNEISIEFLYSMF 240			
Qy	241 GIDAFLLLCFLTTFVARQLPDNYTEGKCTITFGMLVFFPVIWMSFPVYLSTKGKFMAVE 300			
Db	241 GIDAFLLLCFLTTFVARQLPDNYTEGKCTITFGMLVFFPVIWMSFPVYLSTKGKFMAVE 300			
Qy	301 IFAILASHGLLGCIFAPKCLLILLRPERNTSEIVCGRVSTTDNCIQLTSAFVSELNN 360			
Db	301 IFAILASHGLLGCIFAPKCLLILLRPERNTSEIVCGRVSTTDNCIQLTSAFVSELNN 360			
XX	PW0200242464-A2.			
XX	30-MAY-2002.			
XX	15-NOV-2001; 2001WO-US046034.			
XX	21-NOV-2000; 2000US-0252373P.			
PA (ZYMO) ZYMOGENETICS INC.				
XX	Lok S, Holloway JL;			

RESULT 3
ADC85997

ID ADC85997 standard; protein; 755 AA.

XX DR WPI; 2002-479953/51.
XX DR N-PSDB; AAD39172.

PT Novel isolated human V2 vomeronasal receptor, termed Zvn2R1, for identifying presence of Zvn2R1 ligand in sample, as educational tools in laboratory practicum kits for courses related to genetics and molecular biology.

XX PS Claim 5; Page 93-96; 98pp; English.

XX CC The invention relates to an isolated human V2 vomeronasal receptor termed Zvn2R1. The Zvn2R1 nucleic acid is useful for detecting the expression of Zvn2R1 gene in a biological sample, to determine if a subject's chromosomes contain a mutation in the Zvn2R1 gene, and for therapeutic purposes. Zvn2R1 is useful as an aid to teach preparation of antibodies, identifying proteins by Western blotting, protein purification, determining the weight of expressed Zvn2R1 polypeptides as a ratio to total protein expressed, identifying peptide cleavage sites, coupling amino and carboxyl terminal tags, amino acid sequence analysis, monitoring biological activities of both the native and tagged protein in vitro and in vivo and to teach analytical skills such as mass spectrometry, circular dichroism to determine conformation, especially of the four alpha helices X-ray crystallography to determine the three-dimensional structure in atomic detail, and nuclear magnetic resonance spectroscopy to reveal the structure of proteins in solution. Zvn2R1 is useful as educational tools in laboratory practicum kits for courses related to genetics and molecular biology, protein chemistry, antibody production and analysis, and as standards or as unknowns for testing purposes. The invention is useful as a teaching aid to instruct students how to prepare affinity chromatography columns to purify Zvn2R1, and for cloning and sequencing the polynucleotide that encodes an antibody and thus as a practicum for teaching a student how to design humanised antibodies. The invention is useful in gene therapy. The present sequence is chimeric receptor protein. This chimeric sequence was designed by aligning human Zvn2R1 and murine tissue-type vomeronasal putative pheromone receptor (V2R2). (Updated on 29-AUG-2003 to standardise OS field)

XX SQ Sequence 927 AA;

Query Match Score 1986; DB 5; Length 927;
Best Local Similarity 100.0%; Pred. No. 1.5e-200;
Matches 380; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 548 LPHSVCTDVCPPGTVQREPICCFDSIPCADGHVSRKPGERECEQCGEDYWSNAQKS 607

1 LPHSVCTDVCPPGTVQREPICCFDSIPCADGHVSRKPGERECEQCGEDYWSNAQKS 60
61 ECVLKEYEVLAYDEALGETFLVILSFGAFVVLAVTAVYVIRHTRPLVNADWQLGFLIQV 120
608 ECVLKEYEVLAYDEALGETFLVILSFGAFVVLAVTAVYVIRHTRPLVNADWQLGFLIQV 667

121 SLLIMLSSMLFIDKPHNWSMAGQVTLALGFSLCLSLIGKTSSLFLAYRISKSKTQLT 180
668 SLLIMLSSMLFIDKPHNWSMAGQVTLALGFSLCLSLIGKTSSLFLAYRISKSKTQLT 727

181 SMHPLYRKIIVLISVLABIGICTAYLILEPPMVYKQMEQNTKIIILGCNBISIEFLYSMF 240
728 SMHPLYRKIIVLISVLAEIGICTAYLILEPPMVYKQMEQNTKIIILGCNEISIEFLYSMF 787

241 GIDAFLALLCFLTFVARQLDPNNYEGKCITFPGMLVFPIIWMSPFPVYLSTKGKPKMAVE 300
788 GIDAFLALLCFLTFVARQLDPNNYEGKCITFPGMLVFPIIWMSPFPVYLSTKGKPKMAVE 847

620 1FA1ASSHGLLGCFAPKCLLILLRPERNTSEIVCGRVSTTDNCIOLTSASFVSELINT 360
848 1FA1ASSHGLLGCFAPKCLLILLRPERNTSEIVCGRVSTTDNCIOLTSASFVSELINT 907

361 TVSTVDDRVLIYMCPLKLQ 380
908 TVSTVDDRVLIYMCPLKLQ 927

Db 628 TTFVARQLPDNYEGKCITFPGMLVFPIIWMSPFPVYLSTKGKPKMAVE 627

QY 13 GTGRGFVQREPICCPDSIPCADGHVSRKPGERECEQCGEDYWSNAQKSECVLKEVEYLAY 72
CC The invention relates to a novel polynucleotide encoding a guanosine triphosphate-binding protein coupled receptor (GPCR). A polynucleotide of the invention may have a use in gene therapy. The polynucleotide and polypeptide are useful for preparing a composition for treating a patient in need of increased or suppressed activity or expression of the guanosine triphosphate-binding protein coupled receptor. The protein sequences shown in ADC85549-ADC87617 represent GPCR's of the invention.

CC Query Match Score 1906; DB 7; Length 755;
Best Local Similarity 99.7%; Pred. No. 3.4e-192;
Matches 367; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 388 GLGRGFVQREPICCPDSIPCADGHVSRKPGERECEQCGEDYWSNAQKSECVLKEVEYLAY 447

73 DEALGFTLVILSVPFGAFVVLAVTAVYVIRHTRPLVNADWQLGFLIQVSLIIMLSSMLP 132
507 1DKPHNWSMAGQVTLALGFSLCLSLIGKTSSLFLAYRISKSKTQLTSMHPLYRKIIVL 448
508 1DKPHNWSMAGQVTLALGFSLCLSLIGKTSSLFLAYRISKSKTQLTSMHPLYRKIIVL 567

QY 133 ISVLABIGICTAYLILEPPMVYKQMEQNTKIIILGCNBISIEFLYSMF 192
Db 448 DEALGFTLVILSVPFGAFVVLAVTAVYVIRHTRPLVNADWQLGFLIQVSLIIMLSSMLP 507

QY 133 ISVLABIGICTAYLILEPPMVYKQMEQNTKIIILGCNBISIEFLYSMF 192
Db 448 DEALGFTLVILSVPFGAFVVLAVTAVYVIRHTRPLVNADWQLGFLIQVSLIIMLSSMLP 507

QY 193 ISVLABIGICTAYLILEPPMVYKQMEQNTKIIILGCNBISIEFLYSMF 252
Db 568 ISVLABIGICTAYLILEPPMVYKQMEQNTKIIILGCNBISIEFLYSMF 627

QY 253 TTFVARQLPDNYEGKCITFPGMLVFPIIWMSPFPVYLSTKGKPKMAVE 3112
Db 628 TTFVARQLPDNYEGKCITFPGMLVFPIIWMSPFPVYLSTKGKPKMAVE 687

QY 313 GCIFAPKCLLILLRPERNTSEIVCGRVSTTDNCIOLTSASFVSELINT 372

CC nootropic, neuroprotective, anorectic, cardiant, neuroleptic, cytostatic,
 CC antiparkinsonian, hypotensive, antiulcer, antiallergic,
 CC anticonvulsant, and analgesic. The GPCR therapeutic agent, particularly a
 CC GPCR gene agonist or antagonist, is useful for treating a disease or
 CC condition associated with a GPCR in an individual. The nucleic acid cited
 CC above, which is 100 or fewer nucleotides in length, is useful for
 CC assaying a sample for the presence of the GPCR gene nucleic acid or a
 CC GPCR gene nucleic acid with at least one nucleotide difference from a
 CC first nucleic acid, or for diagnosing a susceptibility to a disease or
 CC conditions associated with a GPCR. These diseases include infections
 CC (e.g. bacterial, fungal, protozoan or viral), rheumatoid arthritis,
 CC chronic obstructive pulmonary diseases (COPD), asthma, non-insulin
 CC dependent diabetes, obesity, osteoporosis, Alzheimer's disease, age-
 CC related macular degeneration, myocardial infarction, schizophrenia,
 CC osteoarthritis, cancers, Parkinson's disease, congestive heart failure,
 CC hypertension, ulceration, allergies, benign prostatic
 CC hyperplasia, seizure disorder, anxiety, obsessive compulsive disorder,
 CC Cushing's syndrome, hypopituitarism, or pain. This sequence represents
 CC one of the 62 GPCR proteins of the invention.

XX Sequence 720 AA;

Query Match 87.0%; Score 1727.5; DB 7; Length 720;
 Best Local Similarity 97.9%; Pred. No. 2.5e-173; Matches 331; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

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Qy   1 LPHSYCTDVCPGTRGF-VOREPICCFDSIPCAKGHVSRSRKPGERECEQGBDYWSNAQK 59
Db   383 LPHSYCTDVCPGTRKGIRSEGEPICCFDSIPCAKGHVSRSRKPGERECEQGBDYWSNAQK 442
Qy   60 SECVLKEVEYLAYDEALGFTLVLSVFGAFVYTLAVTAVYVTHRHTPLVNASDWQLGFLIQ 119
Db   443 SECVLKEVEYLAYDEALGFTLVLSVFGAFVYTLAVTAVYVTHRHTPLVNASDWQLGFLIQ 502
Qy   120 VSLIIMLSSMLFDKPHNNSCMAGQVTLLAEGFLSCLGLKTSSLFLAYRISKSRTQL 179
Db   503 VSLIIMLSSMLFDKPHNNSCMAGQVTLLAEGFLSCLGLKTSSLFLAYRISKSRTQL 562
Qy   180 TSMHPLYRKIIIVLISVLAEGICTAYLILEPPPMVYKNMESQNTKIIILGCNEISIBFLYSM 239
Db   563 TSMHPLYRKIIIVLISVLAEGICTAYLILEPPPMVYKNMESQNTKIIILGCNEISIBFLYSM 622
Qy   240 FGIDAFALLCFLTTFVARQLPDNYYECKCITFGMLVFPIIIMSFPVYLSTKGKPKMAV 299
Db   623 FGIDAFALLCFLTTFVARQLPDNYYECKCITFGMLVFPIIIMSFPVYLSTKGKPKMAV 682
Qy   300 EIFAILASSHGLLGCIAPAKCLIIILRERNTSEBIVCG 337
Db   683 EIFAILASSHGLLGCIAPAKCLIIILRERNTSEBIVCG 720

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RESULT 6
 ADI41024 standard; protein: 912 AA.
 XX ADI41024;
 XX DT 22-APR-2004 (first entry)

XX DE Mouse pheromone receptor V2R2.
 XX Receptor; GPCR; G protein-coupled receptor; reproductive disorder;
 KW testicular disorder; was defersen disorder; spermatogenesis; infertility;
 KW XX male; epididymitis; cryptorchidism; sperm transport disorder;
 KW testicular cancer; testicular germ cell tumour; male hormone disorder;
 KW premature puberty; Kallman syndrome; Cushing's syndrome; immune disorder;
 KW leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis;

KW inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
 KW graft-versus-host disease; autoimmunity disorder;
 KW systemic lupus erythematosus; drug induced haemolytic anaemia;
 KW Sjogren's disease; T-cell maturation disorder;
 KW B-cell maturation disorder; vascular disorder; stroke; ischaemia;
 KW myocardial infarction; atherosclerosis; atherosclerosis; arterial dissection;
 KW granulomatous disease, inflammatory bowel disease, sepsis, acne,
 CC neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell
 CC mediated cytotoxicity, immune reactions to transplanted organs and
 CC tissues, such as host-versus-graft and graft-versus-host diseases, or
 CC autoimmune disorders, such as autoimmune infertility, demyelination,
 CC systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
 CC disease, scleroderma, T-cell maturation disorders, B-cell maturation
 CC disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
 CC atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
 CC irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
 CC endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
 CC related proliferative condition (many other diseases and disorders are
 CC listed in the specific condition). The antibodies may be used to purify,
 CC detect and target the G-protein coupled receptor polypeptides. The
 CC present sequence is also useful in gene therapy. The present sequence

CC	represents a species homologue of a novel GPCR of the invention.	PR XX	20-JUL-1999; 99US-0144766P.
SQ	Sequence 912 AA;	PA XX	(REGC) UNIV CALIFORNIA.
	Query Match 72.7%; Score 1444; DB 8; Length 912; Best Local Similarity 74.7%; Pred. No. 3.5e-143; Matches 274; Conservative 37; Mismatches 56; Indels 0; Gaps 0;	PI XX	Ngai J, Specia DJ, Lin DM, Isaacoff EY, Dittman AH, Fan J; WPI; 2001-159517/16.
Qy	2 PHSVCTDVCPGTRGRGFVQREPICCFDSIPCADGHVSRKPGERCEQQGEDYWSNAQKSE 61	PT XX	Novel G protein-coupled odorant family receptors, useful for screening compounds capable of modulating reproductive/sexual and non-sexual social behaviors.
Db	546 PDSFCTQVCPGTRKGIRQGQPICCFDCIPCADGYVSEKSGQRECDPGEDWSNAGSK 605	PT XX	
Qy	62 CTVLKEVEYLAYDEALGFTLVILSVFGAFYVLAATVAVVYIHRHTPLVNADWQLGFLIQVS 121	PS XX	Claim 6; Page 40-42; 62pp; English.
Db	606 CVPKLVFELAYGEALGFTLVILSIFGALVVLAATVAVVYIHRHTPLVNADWQLGFLIQMS 665	CC XX	The patent discloses methods and compositions relating to odorant receptors, including a general expression cloning methodology which is useful for identifying novel G protein-coupled receptors and a novel family of odorant receptors and related nucleic acids, ligands, agonists and antagonists. R5.24 which is an odorant receptor and the nucleic acid sequences encoding R5.24 are useful for screening related receptors, agonists and antagonists of R5.24, which are useful for modulating reproductive/sexual and non-sexual social behaviours mediated through the olfactory system, reproductive physiologies and olfactory system regulated feeding behaviours, migratory behaviours and events such as conception, implantation, oestrous, and menstruation. R5.24 nucleic acid primers, diagnostic nucleic acids, for detecting the presence of R5.24 genes and gene transcripts, and in detecting or amplifying nucleic acids encoding additional R5.24 homologues and structural analogues. The present sequence is Carassius auratus full-length CasR-like protein. CasR -like receptor family shows similarity to receptor 5.24 and is specifically expressed in the goldfish olfactory epithelium
Qy	122 LITMLSSMFLIDKPHNWSMCAGQVTLLAUGFSLCLSLGGKTSSLFLAYRISKSKTQLTS 181	CC XX	
Db	666 LVITVLSSLLFIGPCNWSMCARQITLALLGFCLCLSSILGKTISLFFAYRISVKTRLIS 725	CC XX	
Qy	182 MHPLYRKIIIVLISVLAEGIGCTAYLILEPPMVYKNEMESQNTKILLGCNEISIEFLYSMFG 241	CC XX	
Db	726 MHPIFRKLIVLVCWVGEGIVCAAYLVLEPPRMFKNTIEIQNVKLTIFECNEGSEFLCSIFG 785	CC XX	
Qy	242 IDAFLALLCFLTTFVARQLPDNYYEAKCITFEGMLVFIFIWMSFPVYVLSTKGKFKMAVEI 301	CC XX	
Db	786 FDVLRLALLCFLTTFVARQLPDNYYEAKCITFEGMLVFIFIWMSFPVYVLSTKGKFKVAEI 845	CC XX	
Qy	302 FAILASSHGLLGCIAPKCLLILLRPERNTSETIYCGRVSTTDNCIQLTSAFVSELNNNT 361	CC XX	
Db	846 FAILASSYGLLGCLFLPKCFILLRPKRTNTDETGGRVPVTDRSIQLTSASVSELNST 905	CC XX	
Qy	362 VSTVLDD 368	CC XX	
Db	906 VSTVLDE 912	CC XX	
		SQ	Sequence 835 AA;
			Query Match 40.1%; Score 796.5; DB 4; Length 835; Best Local Similarity 43.5%; Pred. No. 1.1e-74; Matches 147; Conservative 72; Mismatches 118; Indels 1; Gaps 1;
Qy	2 PHSVCTDVCPGTRGRGFVOREPICCFDSIPCADGHVSRKPGERECEQQGEDYWSNAQKSE 61	Qy Db	496 PNSVCSSESCLPGTRKAAMQKGRPVYCYDCIPCAEGEISNETDSNNCKQCPREYWSNAEKTK 555
Qy	62 CVLKEVEYLAYDEALGFTLVILSVFGAFVVLAVTAVVYIHRHTPLVNADWQLGFLIQVS 121	Qy Db	556 CVLKAVEEFLSFTEVMGIVLAAFFSLFGAGLTALVAILFYMRDTPIVKANNSELSFLLLPS 615
Qy	122 LIIMLSSMFLIDKPHNWSMCAGQVTLLAUGFSLCLSLGGKTSSLFLAYRISKSKTQLTS 181	Qy Db	616 LTLCFLCSLTFIGQPNEWSCMRLRHTAFIGITFVLCISCVLGTKTIVVLMAFKATLPGSNVMK 675
Qy	182 -MHPLYRKIIIVLISVLAEGIGCTAYLILEPPMVYKNEMESQNTKILLGCNEISIEFLYSMF 240	Qy Db	676 WFGPAQQRLSVLALTFIGILICVLAEGIGCTAYLILEPPMVYKNEMESQNTKILLGCNEISIEFLYSMF 240
Qy	241 GIDAFLALLCFLTTFVARQLPDNYYEAKCITFEGMLVFIFIWMSFPVYVLSTKGKFKMAVE 300	Qy Db	736 GYIGLLAVLCFLFILAFARTLDPDNFEAKFITESMILIFCAVWITFIPAYVSSPGKYTVAVE 795
Qy	301 IFAILASSHGLLGCIAPKCLLILLRPERNTSEIIVCGR 338	Qy Db	796 IFAILASSFGLLFCIFAPRCXYIILKPDQNTKXMMGK 833
		RESULT 8	
		ID ADI40974	
		ID ADI40974 standard; protein; 848 AA.	
		XX	
		XX	
		AC	
		XX	
		DT	
		XX	
		DE	
		PN WO200105833-A1.	
		XX	
		PD 25-JAN-2001.	
		XX	
		PF 19-JUL-2000; 2000WO-US019687.	
		XX	

XX Receptor; G protein-coupled receptor; reproductive disorder;
 XX testicular disorder; vas deferens disorder; spermatogenesis; infertility;
 XX male; epididymitis; cryptorchidism; sperm transport disorder;
 XX testicular cancer; testicular germ cell tumour; male hormone disorder;
 XX premature puberty; Kallmann syndrome; Cushing's syndrome; immune disorder;
 XX leukaemia; arthritis; AIDS; rheumatoid arthritis;
 XX inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
 XX graft-versus-host disease; autoimmunity disorder;
 XX systemic lupus erythematosus; drug induced haemolytic anaemia;
 XX Sjogren's disease; T-cell maturation disorder;
 XX B-cell maturation disorder; vascular disorder; stroke; ischaemia;
 XX myocardial infarction; atherosclerosis; embolisms, thrombosis, gastrointestinal disorders,
 XX irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
 CC endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
 CC related proliferative condition (many other diseases and disorders are
 CC listed in the specification). The antibodies may be used to purify,
 CC detect and target the G-protein coupled receptor polypeptides. The
 CC polynucleotides are also useful in gene therapy. The present sequence
 -CC represents a species homologue of a novel GPCR of the invention.
 XX

OS *Carassius auratus*.

XX US2004018976-A1.
 PN 29-JAN-2004 .
 XX PR 13-MAY-2003 ; 2003US-00436715.
 XX PR 14-MAY-2002 ; 2002US-0380336P.
 XX PA (FEDER/) FEDER J N.
 PA (MINT/) MINTIER G.
 PA (RAMA/) RAMANATHAN C S.
 PI Feder JN, Mintier G, Ramanathan CS;
 XX DR WPI; 2004-122081/12.
 XX PT New human G-protein coupled receptor polypeptide and polynucleotide,
 PT useful for diagnosing, preventing, treating or ameliorating a medical
 PT condition, e.g. reproductive disorder, immunodeficiency disease or
 PT testicular cancer.
 XX Disclosure; SEQ ID NO 34; 290pp; English.
 XX The invention relates to an isolated human G protein-coupled receptor
 CC polypeptide and its encoding polynucleotide, including the full length
 CC proteins minus the start methionine (and the region of the polynucleotide
 CC encoding this protein region). The proteins are designated HGPRBMY30-1,
 CC HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY41-3,
 CC HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are
 CC expression vectors, host cells, antibodies, preventing (treating or
 CC ameliorating) a medical condition comprising administering to a mammalian
 CC subject the polypeptide or its modulator and diagnosing a pathological
 CC condition or a susceptibility to a pathological condition in a subject
 CC (comprising determining the presence or absence of a mutation in the
 CC polynucleotide, or the presence or amount of expression of the
 CC polypeptide in a biological sample and diagnosing a pathological
 CC condition or a susceptibility to a pathological condition based on the
 CC presence or absence of the mutation, or the presence or amount of
 CC expression of the polypeptide). The human G-protein coupled receptor
 CC polypeptide or polynucleotide can be used for diagnosing a pathological
 CC condition or a susceptibility to a pathological condition in a subject,
 CC and for preventing, treating or ameliorating a medical condition, such as
 CC a disorder related to aberrant G-protein coupled receptor activity, a
 CC disorder related to aberrant signal transduction, a reproductive disorder
 CC ; a male reproductive disorder, a testicular disorder, a vas deferens
 CC disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male,
 CC epididymitis, genital warts, germinal cell aplasia, cryptorchidism,
 CC varicocele, immotile cilia syndrome, viral orchitis, sperm transport
 CC disorders, testicular cancer, choriocarcinoma, non-seminoma,
 CC testicular germ cell tumours, male hormone disorders, premature puberty,
 CC incomplete puberty, Kallmann syndrome, Cushing's syndrome, an immune
 CC disorder, a proliferative immune disorder, leukaemia, arthritis, asthma,
 CC immunodeficiency diseases such as AIDS, rheumatoid arthritis,
 CC granulomatous disease, inflammatory bowel disease, sepsis, acne,
 CC neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell
 CC OS *Carassius auratus*.

CC mediated cytotoxicity, immune reactions to transplanted organs and
 CC tissues, such as host-versus-graft and graft-versus-host diseases, or
 CC autoimmunity disorders, such as autoimmune infertility, demyelination,
 CC systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
 CC disease, scieroderma, T-cell maturation disorders, B-cell maturation
 CC disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
 CC atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
 CC irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
 CC endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
 CC related proliferative condition (many other diseases and disorders are
 CC listed in the specification). The antibodies may be used to purify,
 CC detect and target the G-protein coupled receptor polypeptides. The
 CC polynucleotides are also useful in gene therapy. The present sequence
 -CC represents a species homologue of a novel GPCR of the invention.
 XX

SQ Sequence 848 AA;
 Query Match 39.7%; Score 787.5; DB 8; Length 848;
 Best Local Similarity 41.6%; Pred. No. 9.9e-74;
 Matches 78; Mismatches 116; Indels 1; Gaps 1;
 Matches 139; Conservative 78;
 Qy 1 IPHSVCTDVCPPGTRGRGFVQREBICCFDSIPCADGHVSRKPGERECEQQCGEDYWSNAQKQS 60
 Db 510 VPVSVCSCS CPPGTRGVKKKGPKICCYDCIPCTEBGBISNTTDSVTCLRCHQDFWSNMQND 569
 Qy 61 BCVLKEVEYLAYDBALGFTLVILSVGAFVVLAVTAVVVIHRHTPLVYNASDWQLGFLIQV 120
 Db 570 GCVKKETEFLSYEBRIMGILLTTSLVGAFITIIIAVIFFRYKNTIVKANNSELSFLLLP 629
 Qy 121 SLIIMLSSMLPFDKPHNWSCMAQQVTLALGFSLCLSLLGKTSSLFLAYRISKSKTQLT 180
 Db 630 SMLCFLCSLTFIGRPTEWSCMLRHTAFIGITFVLCLSCVLGKTIIVLMAFRATLPGSNW 689
 Qy 181 S-MHPLYRKITIVLISVLAEGICLAYLLEPPMVYKOMESQNTKILLGNCNEISIEFLYSM 239
 Db 690 KWFGPPQQRLSVPSFTLQVIVCIVLWTTIYPPFPFKQNLNFKEKIIILECNVGSVVGEWAV 749
 Qy 240 FGIDAFALLCPLLTTFVARQLPDNYYEKGKCTIFGMLVFFPIIIMSFPVYVLSTKGKPKMAY 299
 Db 750 LGYIGLLAIALCFLPLAFLARKLPDNFNRAKFITFSMLIPCAVWIAPYVSSPGKFTVAV 809
 Qy 300 BIFAILASHGLLGCIFAPKCLLILLRPERNTSB 333
 Db 810 EVFAILASTYGMFLPCIFPKCYIILLKPDKNKK 843
 RESULT 9
 ADI41018 ID ADI41018 standard; protein; 848 AA.
 ADI41018 AC
 ADI41018 XX
 ADI41018 DT 22-APR-2004 (first entry)
 DE Goldfish putative odorant receptor 2 #2.
 XX Receptor; GPCR; G protein-coupled receptor; reproductive disorder;
 XX testicular disorder; vas deferens disorder; spermatogenesis; infertility;
 XX male; epididymitis; cryptorchidism; sperm transport disorder;
 XX testicular cancer; testicular germ cell tumour; male hormone disorder;
 XX premature puberty; Kallmann syndrome; Cushing's syndrome; immune disorder;
 XX leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis;
 XX inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
 XX graft-versus-host disease; autoimmunity disorder;
 XX systemic lupus erythematosus; drug induced haemolytic anaemia;
 XX Sjogren's disease; T-cell maturation disorder;
 XX B-cell maturation disorder; vascular disorder; stroke; ischaemia;
 XX myocardial infarction; atherosclerosis; gastrointestinal disorder; cancer;
 XX pulmonary disorder; brain disorder; endocrine disorder; cancer;
 XX OS
 OS

PN	US2004018976-A1.	Best Local Similarity 41.6%; Pred. No. 9.9e-74;
XX	29-JAN-2004 .	Matches 139; Conservative 78; Mismatches 116; Indels 1; Gaps 1;
PD	13-MAY-2003 ; 2003US-00436715.	
XX	14-MAY-2002 ; 2002US-0380336P.	
PR	(FEDE/) FEDER J N.	
PA	(MINT/) MINTIER G.	
PA	(RAMA/) RAMANATHAN C S.	
PI	Feder JN, Mintier G, Ramanathan CS;	
XX	DR WPI; 2004-122081/12.	
XX	New human G-protein coupled receptor polypeptide and polynucleotide, useful for diagnosing, preventing, treating or ameliorating a medical condition, e.g. reproductive disorder, immunodeficiency disease or testicular cancer.	
PS	Disclosure; SEQ ID NO 78; 290pp; English.	
XX	The invention relates to an isolated human G protein-coupled receptor polypeptide and its encoding polynucleotide, including the full length proteins minus the start methionine (and the region of the polynucleotide encoding this protein region). The proteins are designated HGPRBMY30-1, HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are expression vectors, host cells, antibodies, preventing (treating or ameliorating) a medical condition comprising administering to a mammalian subject the polypeptide or its modulator and diagnosing a pathological condition or a susceptibility to a pathological condition in a subject (comprising determining the presence or absence of a mutation in the polynucleotide, or the presence or amount of expression of the polypeptide in a biological sample and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of the mutation, or the presence or amount of expression of the polypeptide). The human G-protein coupled receptor polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant signal transduction, a reproductive disorder (a male reproductive disorder, a testicular disorder, a vas deferens disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male, epididymitis, genital warts, germinal cell aplasia, cryptorchidism, varicocele, immotile cilia syndrome, viral orchitis, sperm transport disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma, testicular germ cell tumours, male hormone disorders, premature puberty, incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune disorder, a proliferative immune disorder, leukaemia, arthritis, asthma, immunodeficiency diseases such as AIDS, rheumatoid arthritis, granulomatous disease, inflammatory bowel disease, sepsis, acne, neutropenia, neutrophilia, psoriasis, hypersensitivity, such as T-cell mediated cytotoxicity, immune reactions to transplanted organs and tissues, such as host-versus-graft and graft-versus-host diseases, or autoimmune disorders, such as autoimmune infertility, demyelination, systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's disease, scleroderma, T-cell maturation disorders, B-cell maturation disorders, vascular disorders, stroke, ischaemia, myocardial infarction, atherosclerosis, embolisms, thrombosis, gastrointestinal disorders, irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders, endocrine disorders, or ovarian, stomach, colon or kidney cancer or its related proliferative condition (many other diseases and disorders are listed in the specification). The antibodies may be used to purify, detect and target the G-protein coupled receptor polyptides. The polynucleotides are also useful in gene therapy. The present sequence represents a species homologue of a novel GPCR of the invention.	
SQ	Sequence 848 AA;	
Query Match	39.7%; Score 787.5; DB 8; Length 848;	
Qy	1 LPHSVCTDVCPPGTGRGFVQREPICCFDSIFCAGDHVSRKPGERECEQGEDYWSNAQKS 60	CC
Db	510 VPVSVCSESCPFPGTRKGVKKGKPICCYDCIPCTEGEISNTTDSVTCLRHQDWNSMQND 569	CC
Qy	61 ECVLKEVEYLAYDEALGFTLVILSVFGAFVVLAIVAVYVHRTPLVNASDWLQFLIQV 120	CC
Db	570 GCVKKETEFLSYEEIMGGILLTTISLVGAPITIIIAVIFFRYKNTPTVKANNSELSFLLF 629	CC
Qy	121 SLIIMLLSSMLFDIKPHNWSCMAGQVTLALGFSLCLSLGKTSSLFLAYRISKSTQLT 180	CC
Db	630 SMLCFLCSLTFIGRPTESCMRLHTAFTGIFTVLCPATLPGSNVNM 689	CC
Qy	181 S-MHPLYRKIVLISVLAEGICLAYLILEPMVYKMMESQNTKILLGCNEISIEFLYSM 239	CC
Db	690 KWFGPPQQQLSVPFSFTLQIVICVWLWLTIPPFPEKNNYFKERIILECNVGSVVGFWAV 749	CC
Qy	240 FGIDAFLALLCFCFLTPVAFOLPDMYYEGKCIITFGMLVFPFLIWMSFPVYLSTKGKPKMAV 299	CC
Db	750 LGYIGLAILCFCFLAKLPDNFNEAKFITFSMLIFCAVWIAIFIAYVSSPGRFTVAV 809	CC
Qy	300 EIFAILASSHGLLGC1FAPKCLLIRRPERNTSE 333	CC
Db	810 EFAILASTYGMFLPCIFIPKCYIILLKPDQNSKK 843	CC
	RESULT 10	XX
	AAV72617	XX
	ID AAV72617 standard; protein; 851 AA.	XX
	AC AAV72617;	XX
	DT 02-MAY-2001 (first entry)	XX
	DE Carassius auratus full-length CaSR-like protein #4.	XX
	KW Goldfish; G protein-coupled odorant family receptor; R5.24; screening; conception; reproductive behaviour; sexual behaviour; non-sexual social behaviour; olfactory system; reproductive physiology; feeding behaviour; migratory behaviour; implantation; oestrous; menstruation; CaSR-like protein.	XX
	OS Carasbifus auratus.	XX
	PN WO200105833-A1.	XX
	PD 25-JAN-2001.	XX
	PA (REGC) UNIV CALIFORNIA.	XX
	XX 19-JUL-2000; 2000WO-US019687.	XX
	XX 20-JUL-1999; 99US-014476P.	XX
	XX WPI; 2001-159517/16.	XX
	DR N-PSDB; AAD02602.	XX
	PT Novel G protein-coupled odorant family receptors, useful for screening compounds capable of modulating reproductive/sexual and non-sexual social behaviors.	XX
	PT Claim 6; Page 52-54; 62pp; English.	XX
	CC The patent discloses methods and compositions relating to odorant receptors, including a general expression cloning methodology which is useful for identifying novel G protein-coupled receptors and a novel family of odorant receptors and related nucleic acids, ligands, agonists and antagonists. R5.24 which is an odorant receptor and the nucleic acid sequences encoding R5.24 are useful for screening related receptors,	CC
	CC Sequence 848 AA;	CC

CC agonists and antagonists of R5.24, which are useful for modulating CC reproductive/sexual and non-sexual social behaviours mediated through the CC olfactory system, reproductive physiologies and olfactory system CC regulated feeding behaviours, migratory behaviours and events such as CC conception, implantation, oestrous, and menstruation. R5.24 nucleic acid CC sequence is useful as translatable transcripts, hybridisation probes, PCR primers, diagnostic nucleic acids, for detecting the presence of R5.24 CC genes and gene transcripts, and in detecting or amplifying nucleic acids CC encoding additional R5.24 homologues and structural analogues. The CC present sequence is *Carassius auratus* full-length CasR-like protein. CasR -like receptor family shows similarity to receptor 5.24 and is CC specifically expressed in the goldfish olfactory epithelium

XX Sequence 851 AA;

Query Match 39.5%; Score 783.5; DB 4; Length 851;
Best Local Similarity 42.6%; Pred. No. 2.6e-73;
Matches 144; Conservative 69; Mismatches 124; Indels 1; Gaps 1;

Qy 2 PHSVCTDVCPGTVQREPICCFDSIPCADGHVSRKPGERECEQCGEDYWSNAQKSE 61
Db 513 PvsvcseScCpGTrkavQkGrPvccyDc1pcsegBinnetDssDcfcPdleywsnegrGdk 572

Qy 62 CvlkeyeylaydeAlGftlvIiLsvfGaFvVlAvtaVyyViHrHtpLvnAsDwQlgfliQVs 121
Db 573 CvlkvveflsyteimgtVlcifsfGmIltAivsfvfyLhketPIvrannselsfullJps 632

Qy 122 LiimllssmlFidKphnwsMAGQvtllAlgfslcLscLlgktssLfLayris-Kskrtqlt 180
Db 633 LsIcflcsltfigRptewscmlRhtafGvtFVLciscvlgktivlmafratlpGSnVmK 692

Qy 181 SmhPlyrkiiIVLisVlaBIGctAYLlIepPMVYKnmEsQntKtiIlgcnBisIeFlysmf 240
Db 693 CfgplQorfsVvUsLliQmIcVlwltisSppfpemnLsyrekIilecnlgsalGFwgVl 752

Qy 241 GidaflallCfltfvarQlpDnyyEGKcItFgmlVffIwmSFypVylStKgkpkMave 300
Db 753 GytgllsIcflcilaflarklpDnfNreakPitfsmIifcaWitfipayvSSpgkPftvAvQ 812

Qy 301 IfailasshglGcIfapkclIiLrpBntSeIvgcr 338
Db 813 IfailassfslleFcIfapkcyIIllkpeknTkkQimGk 850

RESULT 11
AAY72615
ID AAY72615 standard; protein; 856 AA.
XX
AC AAY72615;
XX DT 02-MAY-2001 (first entry)

DE Carassius auratus full-length CasR-like protein #2.

XX KW Goldfish; G protein-coupled odorant family receptor; R5.24; screening;
KW conception; reproductive behaviour; sexual behaviour;
KW non-sexual social behaviour; olfactory system; reproductive physiology;
KW feeding behaviour; migratory behaviour; implantation; oestrous;
KW menstruation; CasR-like protein.

XX OS Carassius auratus.

XX FH Key Location/Qualifiers
PT Misc-difference 841
PT PT Misc-difference 849
PT /label= Unknown
PT PT Misc-difference 849
PT /label= Unknown

XX XX WO200105833-A1.

PN XX
XX PD 25-JAN-2001.
XX PF 19-JUL-2000; 2000WO-US019687.

PR XX 20-JUL-1999; 99US-0144766P.
PA XX (REGC) UNIV CALIFORNIA.

PI XX Ngai J, Speca DJ, Lin DM, Isaacoff BY, Dittman AH, Pan J;
XX WPI; 2001-159517/16.

DR XX Novel G protein-coupled odorant family receptors, useful for screening PT compounds capable of modulating reproductive/sexual and non-sexual social behaviors.

XX PS Claim 6; Page 42-44; 62pp; English.

XX CC The patent discloses methods and compositions relating to odorant receptors, including a general expression cloning methodology which is CC useful for identifying novel G protein-coupled receptors and a novel CC family of odorant receptors and related nucleic acids, ligands, agonists CC and antagonists. R5.24 which is an odorant receptor and the nucleic acid CC sequences encoding R5.24 are useful for screening related receptors, CC agonists and antagonists of R5.24, which are useful for modulating CC reproductive/sexual and non-sexual social behaviours mediated through the CC olfactory system, reproductive physiologies and olfactory system CC regulated feeding behaviours, migratory behaviours and events such as CC conception, implantation, oestrous, and menstruation. R5.24 nucleic acid CC sequence is useful as translatable transcripts, hybridisation probes, PCR CC primers, diagnostic nucleic acids, for detecting the presence of R5.24 CC genes and gene transcripts, and in detecting or amplifying nucleic acids CC encoding additional R5.24 homologues and structural analogues. The CC present sequence is *Carassius auratus* full-length CasR-like protein. CaSR CC -like receptor family shows similarity to receptor 5.24 and is CC specifically expressed in the goldfish olfactory epithelium

XX SQ Sequence 856 AA;

Query Match 38.8%; Score 771.5; DB 4; Length 856;
Best Local Similarity 42.2%; Pred. No. 5e-72;
Matches 141; Conservative 66; Mismatches 126; Indels 1; Gaps 1;

Qy 1 LphsVctDvcPPGtGrGfvQrepIccfdSipcadghvsrkpgereceoGedywSnaQks 60
Db 511 LpvsVcsBtcPpgtrkavQkGrPvccyDcIpcgeBisngtdsnDcfcPcdleywsnEsnd 570

Qy 61 EcvLkeyeylaydeAlGftlvIiLsvfGaFvVlAvtaVyyViHrHtpLvnAsDwQlgfliQv 120
Db 571 RcvLkvIefLsyteimgvLcifspGtrkavQkGrPvccyDcIpcgeBisngtdsnDcfcPcdleywsnEsldfLLF 630

Qy 121 SlIimllssmlFidKphnwsCmaGQvtllAlgfslcLscLlgktssLfLayrisKskrtqlt 180
Db 631 SlTlcflcsltfigRptewscmlRhtafGvtFVLciscvlgktivlmafratlpGSnVm 690

Qy 181 S-MhPlyrkiiIVLisVlaBIGctAYLlIepPMVYKnmEsQntKtiIlgcnBisIeFlysmf 239
Db 691 KwfGplQqlsvsLtlQmIrcVlWltisPppPyMnLsyrekIilecnVgSdlafwAv 750

Qy 240 FgidapflallCfltfvarQlpDnyyEGKcItPgLvpfIiwmstFpvylStGkpkMav 299
Db 751 LGytGllsIcflcilaflarklpDnfNreakPitfsmIifcaWitfipayvSSpgkPftvAv 810

Qy 300 EifailasshglGcIfapkclIiLrpBntSeIvgcr 333
Db 811 EifailassfslleFcIfapkcyIIllkpeknTkkQimGk 844

RESULT 12
ADI41017

ID ADI41017 standard; protein; 844 AA.
XX AC ADI41017;
XX DT 22-APR-2004 (first entry)
XX XX

DE Goldfish putative odorant receptor 1 #2.
 XX Receptor; G protein-coupled receptor; reproductive disorder;
 testicular disorder; vas defens disorder; spermatogenesis; infertility;
 XX male; epididymitis; cryptorchidism; sperm transport disorder;
 testicular cancer; testicular germ cell tumour; male hormone disorder;
 premature puberty; Kallmann syndrome; Cushing's syndrome; immune disorder;
 leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis;
 inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
 graft-versus-host disease; autoimmunity disorder;
 systemic lupus erythematosus; drug induced haemolytic anaemia;
 Sjogren's disease; T-cell maturation disorders; B-cell maturation
 disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
 atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
 irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
 endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
 related proliferative condition (many other diseases and disorders are
 listed in the specific definition). The antibodies may be used to purify,
 detect and target the G protein coupled receptor polypeptides. The
 polynucleotides are also useful in gene therapy. The present sequence
 represents a species homologue of a novel GPCR of the invention.
 XX
 OS Carassius auratus.

XX neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell
 mediated cytotoxicity, immune reactions to transplanted organs and
 tissues, such as host-versus-graft and graft-versus-host diseases, or
 autoimmunity disorders, such as autoimmune infertility, demyelination,
 systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
 disease, scleroderma, T-cell maturation disorders, B-cell maturation
 disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
 atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
 irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
 endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
 related proliferative condition (many other diseases and disorders are
 listed in the specific definition). The antibodies may be used to purify,
 detect and target the G protein coupled receptor polypeptides. The
 polynucleotides are also useful in gene therapy. The present sequence
 represents a species homologue of a novel GPCR of the invention.
 XX
 SQ Sequence 844 AA;

Query	Match	Score	DB	Length
QY	2 PHSVCTDVCP PGTPGRGFVOREPICCFDSIPCAADGHVSRKPGERECEQQGDEDWNSNAQKSE	38.7*	8	844;
Db	496 PRSACSESCPPGTRKAQKGPRPFCCYDCIPCAEGEISNNETRFINCKPCKPWEYWNSNAEKNK	41.8*	72;	Pred. No. 7.9e-72;
QY	62 CVLKEVEYLAYDEALGFTLVLSVFGAFVVLAVTAVYVHRTPLVWNASDWQLGFLIQVS	38.7*	72;	Best Local Similarity
Db	556 CVLKAVEFLLSFTEIMGVVLVFFSLFGVGLTLVAILFYNKDKDTPMVKANNSESLFLLLFS	41.8*	129;	Matches 145; Conservative
QY	122 LIIMLSSMLFDKPHNWSCMAGQVTLALGFSLCLGKTSSLFLAYRISKTKTQLTS	38.7*	121;	Indels 1;
Db	616 LTLCFLCSLTFIGRPTEWSCMLCHTAFGITFVLCISCVLGKTIIVVLMMAFKATLPGNNNMK	41.8*	555	Gaps 1;
QY	182 -MHPFLYRKIILVLLSVLAEGICTAYLILEPPMVYKNMESQNTKIIKGNCNEISIEFLYSMF	38.7*	181;	
Db	676 WFGPAQQRLPSVLAFTLQVIICVWLWTISPPFPYKNMRYKEKITLECSSLGKTIIVVLMMAFKATLPGNNNMK	41.8*	675	
QY	241 GIDAFALLCFLTTFVVARQLPDNYEYGKCITFGMLVFFIWIWSFVPPVYLSTKGKFKMVAE	38.7*	300;	
Db	736 TYISLIAFLCFLPILAFLARTLDPKNEAKFITFSMLIFCAWITFIPAYVSSPGKFTVAVE	41.8*	795	
QY	301 IFAILASSHGLLGCIFAPKCLLILRPERNTSEIVGRVSTTDNCIQ	38.7*	347;	RESULT 1.3
Db	796 IFAILSSSGFLFGIFAPKCYIILLKPEQNTKQHLIGKTASVSLALQ	41.8*	842;	ADI40973 standard; protein; 844 AA.
QY	DT 22-APR-2004 (first entry)			
Db	XX Goldfish putative odorant receptor 1.			
QY	XX ID ADI40973			
Db	XX ADI40973;			
QY	XX DT 22-APR-2004 (first entry)			
Db	XX DE ADI40973 standard; protein; 844 AA.			
QY	XX DE ADI40973;			
Db	XX DT 22-APR-2004 (first entry)			
CC	XX The invention relates to an isolated human G protein-coupled receptor CC polypeptide and its encoding polynucleotide, including the full length CC proteins minus the start methionine (and the region of the polynucleotide CC encoding this protein region). The proteins are designated HGPRBMY30-1, CC HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY41-3, CC HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are CC expression vectors, host cells, antibodies, preventing (treating or CC ameliorating) a medical condition comprising administering to a mammalian CC condition or a susceptibility to a pathophysiological condition based on the CC presence or absence of the polypeptide. The human G-protein coupled receptor CC polypeptide or polynucleotide can be used for diagnosing a pathological CC condition or a susceptibility to a pathological condition in a subject, CC and for preventing, treating or ameliorating a medical condition, such as CC a disorder related to aberrant G-protein coupled receptor activity, a CC disorder related to aberrant signal transduction, a reproductive disorder CC ; a male reproductive disorder, a testicular disorder, a vas deferens CC disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male, CC varicocele, immortal cilia syndrome, cryptorchidism, sperm transport CC disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma, CC testicular germ cell tumours, male hormone disorders, premature puberty, CC incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune CC disorder, a proliferative immune disorder, leukaemia, arthritis, asthma, CC immunodeficiency diseases such as AIDS, rheumatoid arthritis, CC granulomatous disease, inflammatory bowel disease, sepsis, acne,			
OS	OS Carassius auratus.			

XX US2004018976-A1.
 PN XX
 PD XX 29-JAN-2004.
 PP XX 13-MAY-2003; 2003US-00436715.
 PR XX 14-MAY-2002; 2002US-0380336P.
 XX PA (FEDB/) FEDER J N.
 PA (MINT/) MINTIER G.
 PA (RAMA/) RAMANATHAN C S.
 XX PI Feder JN, Mintier G, Ramanathan CS;
 XX WPI; 2004-122081/12.
 XX DR; 2004-122081/12.

PT New human G-protein coupled receptor polypeptide and polynucleotide,
 PT useful for diagnosing, preventing, treating or ameliorating a medical
 PT condition, e.g. reproductive disorder, immunodeficiency disease or
 PT testicular cancer.

XX PS Disclosure: SEQ ID NO 33; 290pp; English.

XX The invention relates to an isolated human G protein-coupled receptor
 CC polypeptide and its encoding polynucleotide, including the full length
 CC proteins minus the start methionine (and the region of the polynucleotide
 CC encoding this protein region). The proteins are designated HGPRBMY30-1,
 CC HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY42,
 CC HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are
 CC expression vectors, host cells, antibodies, preventing (treating or
 ameliorating) a medical condition comprising administering to a mammalian
 CC subject the polypeptide or its modulator and diagnosing a pathological
 CC condition or a susceptibility to a pathological condition in a subject
 (comprising determining the presence or absence of a mutation in the
 CC polynucleotide, or the presence or amount of expression of the
 CC polypeptide in a biological sample and diagnosing a pathological
 CC condition or a susceptibility to a pathological condition based on the
 CC presence or absence of the mutation, or the presence or amount of
 CC expression of the polypeptide). The human G-protein coupled receptor
 CC polypeptide or polynucleotide can be used for diagnosing a pathological
 CC condition or a susceptibility to a pathological condition in a subject,
 CC and for preventing, treating or ameliorating a medical condition, such as
 CC a disorder related to aberrant G-protein coupled receptor activity, a
 CC disorder related to aberrant signal transduction, a reproductive disorder
 CC ; a male reproductive disorder, a testicular disorder, a vas deferens
 CC disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male,
 CC epididymitis, genital warts, Germinal cell aplasia, cryptorchidism,
 CC varicocele, immotile cilia syndrome, viral orchitis, sperm transport
 CC disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma,
 CC testicular germ cell tumours, male hormone disorders, premature puberty,
 CC incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune
 CC disorder, a proliferative immune disorder, leukaemia, arthritis, asthma,
 CC immunodeficiency diseases such as AIDS, rheumatoid arthritis,
 CC granulomatous disease, inflammatory bowel disease, sepsis, acne,
 CC neutropenia, neutrophilia, psoriasis, hypersensitivity, such as T-cell
 CC mediated cytotoxicity, immune reactions to transplanted organs and
 CC tissues, such as host-versus-graft and graft-versus-host diseases, or
 CC autoimmunity disorders, such as autoimmune infertility, demyelination,
 CC systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
 CC disease, scleroderma, T-cell maturation disorders, B-cell maturation
 CC disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
 CC atherosclerosis, embolisms, thrombosis, gastrointestinal disorders, brain disorders,
 CC irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
 CC endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
 CC related proliferative condition (many other diseases and disorders are
 CC listed in the specification). The antibodies may be used to purify,
 CC detect and target the G-protein coupled receptor polypeptides. The
 CC polynucleotides are also useful in gene therapy. The present sequence
 CC represents a species homologue of a novel GPCR of the invention.

XX SQ Sequence 844 AA;

Query Match 38.7%; Score 769.5; DB 8; Length 844;
 Best Local Similarity 41.8%; Pred. No. 7.9e-72;
 Matches 145; Conservative 72; Mismatches 129; Indels 1; Gaps 1;

QY 2 PHSVCTDVCP PGTRGFVQREPICCFDSDIP CADGHVSRKPGERECEQCGEDYWSNAOKS 61
 DB 496 PRSACSESCPPGTRKAAQGRPFCCYDCIPCAEGEISNETRFINCKPCPWEYWSNAEKWK 555
 QY 62 CVLKAVEFLSPTEIMGVVLVPPSLFGVGLTLLVAILFLYNKCKDTPMVKANNSELSPLLFS 615
 QY 122 LIIMLSSMLFDKPHNWSCMAGQVTLLALGFSCLSLCGLGKTSSLPLAYRISKSRTQLTS 181
 DB 616 LTLCFLCSLTPIGRPTESCMCLCTAFTGIFTVLCISCVLGKTIVVLMAPKATLPGNNMK 675
 QY 182 -MHPLYRKIVIILSVLABIGCTAYLILEPPMVYKNNMESQNTKILLGCNEISIEFLYSMF 240
 DB 676 WFGPAQQRLSVLAFTLIQVIIICVWLMTISPFPYKMMYYKEKILLECSLGTIGFWAVL 735
 QY 241 GIDAFLALLCFLFTTFVARQLPDNYVEGKCITFGMLVFPFLIWMSFVPYYLSTKGKPKMAYB 300
 QY 736 TYISLLAFLCFIILAFARTLPDKPNKAKFITPSMLIFCAVWITFIPAYVSSPGRFTVAVB 795
 DB 301 IFAILASSHGLLGCIAPKCLLILLRPERNTSBIVGRVSTTDNCIQ 347
 DB 796 IFAILSSSGIILFGIFAPKCYIILKPEQNTKQHJLGTASVSLAQ 842

RESULT 14
 ID AAY72616 standard; protein; 854 AA.
 XX AAY72616;
 XX DT 02-MAY-2001 (first entry)
 Carassius auratus full-length CasR-like protein #3.
 DB XX
 XX KW Goldfish; G protein-coupled odorant family receptor; R5.24; screening;
 XX KW conception; reproductive behaviour; sexual behaviour;
 XX non-sexual social behaviour; olfactory system; reproductive physiology;
 XX feeding behaviour; migratory behaviour; implantation; oestrous;
 XX menstruation; CasR-like protein.
 XX OS Carassius auratus.
 PN WO200105833-A1.
 XX PD 25-JAN-2001.
 XX PF 19-JUL-2000; 2000WO-US019687.
 (REGC) UNIV CALIFORNIA.
 XX PI Ngai J, Specia DJ, Lin DM, Isaacoff EY, Dittman AH, Pan J;
 XX DR WPI; 2001-159517/16.
 DR N-PSDB; AAD02601.
 XX PT Novel G protein-coupled odorant family receptors, useful for screening
 PT compounds capable of modulating reproductive/sexual and non-sexual social
 PT behaviors.
 XX PS Claim 6; Page 47-49; 62pp; English.

XX The patent discloses methods and compositions relating to odorant
 CC receptors, including a general expression cloning methodology which is
 CC useful for identifying novel G protein-coupled receptors and a novel
 CC family of odorant receptors and related nucleic acids, ligands, agonists
 CC and antagonists. R5.24 which is an odorant receptor and the nucleic acid
 CC

CC sequences encoding R5.24 are useful for screening related receptors,
 CC agonists and antagonists of R5.24, which are useful for modulating
 CC reproductive/sexual and non-sexual social behaviours mediated through the
 CC olfactory system, reproductive physiologies and olfactory system
 CC regulated feeding behaviours, migratory behaviours and events such as
 CC conception, implantation, oestrous, and menstruation. R5.24 nucleic acid
 CC primers, diagnostic nucleic acids, for detecting the presence of R5.24
 CC genes and gene transcripts, and in detecting or amplifying nucleic acids
 CC encoding additional R5.24 homologues and structural analogues. The
 CC present sequence is Carassius auratus full-length CasR-like protein. CasR
 CC -like receptor family shows similarity to receptor 5.24 and are
 CC specifically expressed in the goldfish olfactory epithelium

SQ Sequence 854 AA;

Query Match 38.3%; Score 760.5; DB 4; Length 854;
 Best Local Similarity 41.5%; Fred. No. 7.2e-71;
 Matches 142; Conservative 68; Mismatches 131; Indels 1; Gaps 1;

Qy 1 LPHSVCTDVCPPGTGRGFVQRBPICCFDSIPCAKGHVSRKPGERECEQCGEDYWSNAQKS 60
 Db 511 LPGSVCESCPCTGTRKTVQKGRPVCCYDCTPCAEGISNSTSDSDCFPCDLEYWSNESRD 570
 Qy 61 ECVLKEYEYLAYDEALGFTLVILSVFGAFVVLAVTAVYVIRHRTPLVNASDWOLGFELIQV 120
 Db 571 RCVLKVVEFLSYTEIMGMVLCIFSFIGVLLTAMVSEFLFYLNKETPIVRANNSELSFLLF 630
 Qy 121 SLIIMLSSMLFIDKPKNWSCMAGQVTLALGFSLCLSLCLGKTSSLFLAYRISKSKTQLT 180
 Db 631 SLSLCFLCSLTPIGRPTELSCMLRHTAFGITFVLCISCVLGKTLVVLMAFRATLPGSDVM 690
 Qy 181 S-MHPLYRKIIIVLISVLAEGIQTAYLILEPPMVYKNMESQNTXKILLGCNEISIEFLYSM 239
 Db 691 KWFGPAQQRLSVSLLTQVIVCVLWLTTISPPFPYMNLSYYREKTIILECNVGSALGFWTv 750
 Qy 240 FGIDAFALLCFLITFVARQLPDNYNEYCKCITFGMLVFFIWIIMSFPVYLSSTKGKFKMAV 299
 Db 751 LCYTGLLSSLCFLCVIAFLARKLPDNFNEAKPITFSMLIFCAVWLTFIPAYSSPGKFTVAV 810
 Qy 300 EIFAILASSHGLLSCIFAPKCLLILLRPERNTSEIVGRVST 341
 Db 811 EIFAILVSSFGLLFCIFAPKCYIILLKPEKNTKQMGKSST 852
 RESULT 15
 ADI40971 ID ADI40971 standard; protein; 880 AA.
 XX AC ADI40971;
 DT 22-APR-2004 (first entry)
 XX DE Fugu pheromone receptor 4.
 XX KWRceptor; G protein-coupled receptor; reproductive disorder;
 KW testicular disorder; vas deferens disorder; spermatogenesis; infertility;
 KW XX male; epididymitis; cryptorchidism; sperm transport disorder;
 KW testicular cancer; testicular germ cell tumour; male hormone disorder;
 KW premature puberty; Kallman syndrome; Cushing's syndrome; immune disorder;
 KW leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis;
 KW inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
 KW graft-versus-host disease; autoimmunity disorder;
 KW systemic lupus erythematosus; drug induced haemolytic anaemia;
 KW Sjogren's disease; T-cell maturation disorder; stroke; ischaemia;
 KW atherosclerosis; embolisms; thrombosis; gastrointestinal disorders;
 KW pulmonary disorder; brain disorder; endocrine disorder; cancer;
 KW gene therapy.

OS TakiFugu rubripe.
 XX PN US200418976-A1.

XX PD 29-JAN-2004.
 XX PF 13-MAY-2003; 2003US-00436715.
 XX PR 14-MAY-2002; 2002US-0380336P.
 XX PA (FEDE/) FEDE J N.
 PA (MINT/) MINTIER G.
 PA (RAMA/) RAMANATHAN C S.
 Feder JN, Mintier G, Ramanathan CS;
 WPI; 2004-122081/12.
 XX DR
 XX PT New human G-protein coupled receptor polypeptide and polynucleotide,
 PT useful for diagnosing, preventing, treating or ameliorating a medical
 PT condition, e.g. reproductive disorder, immunodeficiency disease or
 PT testicular cancer.
 XX Disclosure; SEQ ID NO 31; 290pp; English.
 XX PS
 XX CC The invention relates to an isolated human G protein-coupled receptor
 CC polypeptide and its encoding polynucleotide, including the full length
 CC proteins minus the start methionine (and the region of the polynucleotide
 CC encoding this protein region). The proteins are designated HGPRBMY30-1,
 CC HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY41-3,
 CC HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are
 CC expression vectors, host cells, antibodies, preventing (treating or
 CC ameliorating) a medical condition comprising administering (treating or
 CC subjecting the polypeptide or its modulator and diagnosing a pathological
 CC condition or a susceptibility to a pathological condition in a subject
 CC comprising determining the presence or absence of a mutation in the
 CC polynucleotide, or the presence or amount of expression of the
 CC polypeptide in a biological sample and diagnosing a pathological
 CC condition or a susceptibility to a pathological condition based on the
 CC presence or absence of the mutation, or the presence or amount of
 CC expression of the polypeptide). The human G-protein coupled receptor
 CC polypeptide or polynucleotide can be used for diagnosing a pathological
 CC condition or a susceptibility to a pathological condition in a subject,
 CC and for preventing, treating or ameliorating a medical condition, such as
 CC a disorder related to aberrant G-protein coupled receptor activity, a
 CC disorder related to aberrant signal transduction, a reproductive disorder
 CC ; a male reproductive disorder, a testicular disorder, a vas deferens
 CC disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male,
 CC epididymitis, genital warts, germinal cell aplasia, cryptorchidism,
 CC varicocele, immotile cilia syndrome, viral orchitis, sperm transport
 CC disorders, testicular cancer, choriocarcinoma, non-seminoma,
 CC testicular germ cell tumours, male hormone disorders, premature puberty,
 CC incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune
 CC disorder, a proliferative immune disorder, leukaemia, arthritis, asthma,
 CC immunodeficiency diseases such as AIDS, rheumatoid arthritis,
 CC granulomatous disease, inflammatory bowel disease, sepsis, acne,
 CC neutropenia, neutrotoxicity, immune reactions to transplanted organs and
 CC tissues, such as host-versus-graft and graft-versus-host diseases, or
 CC autoimmunity disorders, such as autoimmune infertility, demyelination,
 CC systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
 CC disease, scleroderma, T-cell maturation disorders, B-cell maturation
 CC disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
 CC atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
 CC irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
 CC endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
 CC related proliferative condition (many other diseases and disorders are
 CC listed in the specification). The antibodies may be used to purify,
 CC detect and target the G-protein coupled receptor polypeptides. The
 CC polynucleotides are also useful in gene therapy. The present sequence
 XX represents a species homologue of a novel GPCR of the invention.
 SQ Sequence 880 AA;
 Query Match 37.9%; Score 753.5; DB 8; Length 880;
 Best Local Similarity 41.9%; Pred. NO. 4.1e-70;

Matches	139;	Conservative	69;	Mismatches	123;	Indels	1;	Gaps	1;
Qy	1	LPHSYCTDVCPPGTGRGFVQREPICCFDSDIPCAADGHVSRKPGERECEQCQGEDYWSNAQKS	60						
Ddb	538	VPLSVCSSICPPGTRKAIRPNYPICCHDCVVCUTAGEISNQTDAIECARCLPEFWSNADRT	597						
Qy	61	ECVLKEVEYILAYDEALGFTLVILSVFGAFVVLAVTAVYVIHRHTPLVNASDWQLGFLIQV	120						
Ddb	598	ACVPKQVEFLSFGDTIGIALLYVSLLIGSFLTCAVAVALVEFYHRTSPIVRANNSDLSSLFFL	657						
Qy	121	SЛИМЛSSMLFIDKPKNWSCMAGQVTLLAIGFSLCLSCLLGKTTSSLFLAYRISKSKTQLT	180						
Ddb	658	SLTLCFLCSLTFISPPSQWSQMSMLRHTAFCGITFVLCLCISCLGKTIWVLMAFRATLPGSDVM	717						
Qy	181	S-MHPLYRKIIIVLISVLAEGIGICTAYLILEPPMVVKNMESQNTKILGCNEISIEFLYSM	239						
Ddb	718	KWFGPCKQKAIITESTLIVQVVICTVWLWVAPPTRQIMPRESAIIILLCDEGSTIAFSLV	777						
Qy	240	FGIDAFALLICFLTTVAROLPDNYEYEGKCITFGMLVFIFIWMSFVPVYLSTKGKFIMAV	299						
Ddb	778	LGYIGYVLACMCFLAFLARKLPPDNFNEARLIASFMSLIFCAUWWVAFVPAYISSPGKYSTLT	837						
Qy	300	EIFAILASSHGLLGGCTIFAPKCLLILLRPERNT	331						
Ddb	838	EIFAILASSXYGLLGGCTIFAPKCYXILMKSEKNT	869						

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